Exhibit 1

Curriculum vitae

NAME: Leonid Anatolievich Yakubov

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MARITAL STATUS: Married, two children

EDUCATION:

1968-1974 Student, Biology Department, Novosibirsk State University, Biochemistry major.

1985-1988 Post-Graduate Student, Novosibirsk Institute of Bioorganic Chemistry, Siberian Division, Academy of Sciences of Russia

1989, Ph.D. Thesis "Interaction of alkylating oligonucleotide derivatives with mammalian cells and their inhibition of the tick-borne encephalitis virus multiplication", in Novosibirsk Institute of Bioorganic Chemistry, Academy of Sciences of USSR. Thesis advisor: Professor Valentin V. Vlassov

CURRENT RESEARCH INTERESTS

Mechanisms of genomic management in somatic cells and their role in biological processes in the organism.

EXPERIENCE

1974-1976: Graduate student, Institute of Cytology and Genetics, Siberian Division of USSR Academy of Sciences, Novosibirsk.

1976-1985: Junior Sci. Researcher, All-Union Scientific Research Institute of Molecular Biology, State Department of Microbiological Industry, Koltsovo (Novosibirsk region)

1985-1988: Post-Graduate Student, Novosibirsk Institute of Bioorganic Chemistry, Siberian Division of Russian Academy of Sciences.

1988-1991: Research Scientist, Novosibirsk Institute of Bioorganic Chemistry of Siberian Division of Russian Academy of Sciences.

1991-1999, Senior Scientist, Group Leader, Laboratory of Biochemistry of Nucleic Acids, Novosibirsk Institute of Bioorganic Chemistry of Siberian Division of Russian Academy of Sciences, 8 Lavrentiev Ave., Novosibirsk 630090, Russia.

1990-1997: (part time) Visiting Scientist at College of Physicians and Surgeons at Columbia University (New York), Division of Medical Oncology, Dr. C. A. Stein laboratory (NCI/NIH awards).

1999-2000, Research Associate, Thomas Jefferson University, Department of Microbiology and Immunology (Philadelphia, PA).

CURRENT POSITION:

2000- present, President of Panagenic International Inc., 2935 Byberry Road, #206, Hatboro, PA 19040. Telephone/fax 215-443-8550. E-mail: panagenic@cs.com; yakubovl@yahoo.com; yakubov@hotmail.com

GRANTS:

Co-principal investigator, grant of the Russian governmental program Fundamental Research, "Nucleic acids binding receptors in cells and organism"., 1991-1995.

Principal investigator, grant of the program Priority Directions of Genetics, 1991-1994.

Principal investigator, grant of the International Science Foundation, New York (Soros Fund), "Fate of Free Nucleic Acids in Animal Organism: Penetration into Cells, Possible Involvement in Regulation and Pathology", 1994-1995.

Principal investigator 1997-1999: Russian Foundation for Fundamental Research Grant "Transportation of nucleic acids across biological barriers".

Principal investigator 1997 Gene Therapy Program Grant (Russian)

AWARDS

1994-1996, Russian President's Award for "Outstanding Scientist of Russia",.

1999, **State Prize of Russian Federation** and Golden Medal in the field of science and technology for the work "Derivatives of oligonucleotides are biologically active substances and research tools for nucleo-protein interactions". The highest national prize in science in Russia.

TEACHING EXPERIENCE

Three Ph. D. dissertations were successfully produced in Dr. Yakubov's group under his supervision. Three students were awarded their Ph.D.s in his group: 1993, Valery N. Karamyshev (now at NIH, Bethesda, MD); 1994, Marina V. Nechaeva (now at New York Medical College, Valhalla, NY) and 1999, Olga E. Shestova (now at Thomas Jefferson University).

SOCIETY MEMBERSHIPS

Member of American Association for Cancer Research since 1994.

Member of Russian Biochemical Society

PUBLICATIONS and CITATIONS

List of publications consists of 47 papers. Number of citations of these papers by other authors exceeds 700.

Author of 3 US patents, pending.

OTHER INTERESTS:

Mountain climbing, hiking. Climbed over 50 peaks and passes (the highest 6200 m above sea level) at the Pamirs, Tien Shang, Altai, Rocky Mts, etc.

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3. Vlassov, V.V., Gorokhova, O., Ivanova, E.M., Kutyavin, I.V., Yurchenko, L.A., Yakubov, L.A., Abdukayumov, M.N. and Skoblov, Y.S. "Interaction of alkylating oligonucleotide derivatives with mouse fibroblasts", Biopolimery i Kletka, (1986), 2, 323-327.
4. Belyaev, N.D., Vlassov, V.V., Kobets, N.D., Ivanova, E.M., Yakubov, L.A. "Complementary-addressed modification of DNA in metaphase chromosoms and interphase chromatin." Doklady Akad. Nauk USSR (1986), 291, 234-236.
5. Pogodina, V.V., Frolova, T.V., Abramova, T.V., Vlassov, V.V., Ivanova, E.M., Kutiavin, I.V., Pletnev, A.G. and Yakubov, L.A. "Oligonucleotide derivatives complementary to tick-borne encephalitis virus RNA inhibit the virus multiplication in cell culture", Dokl. Akad. Nauk. USSR, (1988), 301, 1257-1260.
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7. Pogodina, V.V., Frolova, T.V., Frolova, M.P., Abramova, T.V., Vlassov, V.V., Knorre, D.G., Pletnev, A.G. and Yakubov, L.A. "Oligonucleotides complementary to tick-borne encephalitis virus RNA inhibit development of infection in mice", Dokl. Akad. Nauk. USSR, (1989), 308, 237-240.
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